In Defense of Prepalatal Non-fricative Sounds and Symbols : towards the Tibetan Dialectology*

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1. Introduction

There are two prepalatal[1] sounds [ɕ] and [ʑ] registered in the International Phonetic Alphabet (henceforth IPA), and they are put outside its consonant chart because they

* The fundamental claim of this article was presented at 17th Himalayan Languages Symposium (Suzuki 2011a) based on an article written in Japanese (Suzuki 2010a). A part of the discussion provided in Section 3 was also presented at 13th Seminar of the International Association for Tibetan Studies (Suzuki 2013a). This article is a re-structured version of these works. I should like to express my gratitude for heartful Tibetan friends who helped me as well as for the staff of Makye Ame Shangri-La Tibetan Palace in Kunming who gave me innumerable aid. My thanks also go to all the friends and colleagues who gave me insightful comments. My field researches in Yunnan Tibetan in 2005-2015 have been made possible through the financial support of Grants-in-Aid for Scientific Research of Japan Society for the Promotion of Science: “Linguistic Substratum in Tibet” headed by Yasuhiko Nagano, No. 16102001; “Dialectological Study of the Tibetan Minority Languages in the Tibetan Cultural Area in West Sichuan” headed by the present author; “International Joint Survey of rGyalrongic Languages” headed by Yasuhiko Nagano, No. 21251007; “Study on the dialectal development of Tibetan spoken in Yunnan, China, through a description of the linguistic diversity” headed by the present author, No. 25770167, as well as a private financial support of Yunnan Tibetology Committee headed by Xu Jianhua. My concept of the phonetic description applied for the Tibetan dialectology may be called ‘pandialectal phonetic description’, which needs a unified and sufficient frame of phonetic symbols. See Tournadre & Suzuki (forthcoming) on its philosophy for details. I hereby confirm that the concept provided in this article is always valid and stricly applied in all the related articles written by the present author, whether they are cited here or not. For a comprehensive discussion concerning this topic, see Suzuki (2016).

[1] In the IPA chart, this articulatory position is called ‘alveolo-palatal.’ Another name ‘alveopalatal’ is also used. But these names are so confusable with ‘palato-alveolar’ that Zhu (2010:124-126) proposes a name ‘prepalatal’ and ‘postalveolar’ for each instead. I follow Zhu’s (2010) terminology.

are limited in fricatives. This article fundamentally aims to claim the necessity of at least three prepalatal sound symbols [ʈ, ɖ, ɳ] excluded from the IPA and included in the Chinese phonetic chart, based on my phonetic observation and description of more than two hundred fifty varieties of the Tibetic languages.[2] The "prepalatal non-fricative sounds and symbols" in the title of this article just designate [ʈ, ɖ, ɳ], which have not officially admitted.

Previous monographs and textbooks of Lhasa or so-called *Standard* Tibetan, for example, describe a sound corresponding to Written Tibetan (WrT[3]) *ny*[4] in two phonetic symbols: [ɳʑ][5] and [ɲɲ][6]. Each of the sounds [ɳʑ] and [ɲɲ] represents a different articulation --- this is the fundamental understanding of the present author ---, in fact, the use of [ɳʑ] is often rigorously disputed because it is not authorised in the IPA chart. In addition, I have always heard that [ɳʑ] and [ɲɲ] represent a single sound,[7] of which the former is used only by Chinese scholars. One may claim that this mention is based on the difference of conventions. For example, LaPolla & Huang (2003:422) mention on Yadu Qiang:[8] "The form /ɳʑ/ is used instead of the standard IPA /ɲɲ/ simply to be consistent with other works on the language published in China (where this form is standard usage), ...".[9] However, Zhu (2010) evidently shows that these criticisms are not significant, for the frame of IPA and that of Asian languages are different from each other. In addition, Canepari (2006:xiv) states: "È la *fonologia* che fa parte della *fonetica*" (It is the phonology which is a part of the phonetics). These views imply that the limitation of phonetic description can directly influence a phonological analysis, hence we need a clear vision for the phonetics to be applied in related linguistic descriptions.

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[2] As for the concept of *Tibetic*, see Tournadre (2008, 2014).

[3] In this article, Old and Classical Tibetan are consistently called 'Written Tibetan' and it is henceforth abbreviated as WrT.

[4] The transliteration of WrT is based on the Wylie system except for the capitalisation rule applied for proper names.

[5] See Jin (1983) and Qu (2007).

[6] See Hoshi (2003) and Tournadre & Sangda Dorje (2009).

[7] This claim is, in fact, completely incorrect because the Chinese phonetic symbol chart does include both [ɳʑ] and [ɲɲ] (*Fangyan Diaocha Zibiao* 1981:81-82; Zhu 2012:108).

[8] According to Sims (2016), Qiang should be treated as a cluster of related languages rather than a single language, and he suggest to call them 'Rmaic languages'.

[9] According to my data of Goukou and Musu varieties of the Rmaic languages, /ɳʑ/ is pronounced as a prepalatal nasal [ɳʑ], and a palatal nasal [ɲɲ] does not appear. See also Section 2.

This article will discuss the above-mentioned issue in Tibetan dialectology, by providing a presentation of two reasons: 1) a criticism based on Zhu (2010) against the IPA system, and 2) a presentation of the data set of several Khams Tibetan dialects mainly spoken in Shangri-La County, Yunnan, China, with a consideration on these data from the historical perspective.

2. Myth of the IPA consonant chart

This section presents the problems of the IPA consonant system of the prepalatal and palatal position, and provides a validity of prepalatal sound symbols from a more theoretical aspect. Through a display of concrete cases, I will demonstrate that the IPA system has not been designed for a universal phonetic description despite its concept of foundation and that we cannot expect its almighty use for any languages --- which should be called "myth" if those who *believe in* the IPA system still exist.

The treatment of the prepalatal series in the IPA consonant chart is so lamentable because only two fricatives of the prepalatal series [ɕ, ʑ] exist, which are located out of the main table although there was a column named alveolo-palatal before its revision 1989.[10] We often see their affricate forms [tɕ, dʑ] as well, thus it is possible that the tongue makes a complete contact at the prepalatal position. Imaginative readers can understand that the same relation should be attested in other manners of articulation if [ɕ] and [ç] are different sounds from each other. At least, the model of the *analphabetic notation* developed by Jespersen (1889, 1913[2]) makes possible to describe the different manner for each defined articulatory position.[11] However, the IPA chart lacks symbols except the fricatives,[12] whereas the Chinese phonetic chart (cf. Kong et al. 2011:289;

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[10] Zhu (2010:125) points out that this lamentable treatment may originate from the minor appearance of prepalatal sounds in the European languages which can have influenced the formation of the basic IPA charts. In fact, the difference of postalveolar-prepalatal-palatal sounds is not so sensitive in some European languages, for example, Thráinsson et al. (2012:44) mention on Faroese (a Germanic language): "... Faroese has no palatal stop series, the palatal stops having turned into alveopalatal (or palatoalveolar or postalveolar or prepalatal) affricates." Note that the frame of Zhu (2010) distinguishes postalveolars (=palatoalveolars) from prepalatals (=alveopalatals).

[11] According to Jespersen (1913[2]), the articulatory position of postalveolars should be *fg*, that of prepalatals *g* or *gf*, and that of palatals *h*. The difference of manner and voicing is represented by adding another notations.

[12] The symbol [ɳ] is necessary to describe a phonetic aspect of some European languages such as Croatian (cf. Brozović 2007:32-34), Serbian, Bosnian, Crna Goran as well as Polish (all of them belong to the Slavonic group).

Jiang 2012:31) has them. Hence, the fact that Chinese scholars use prepalatals, for example, [ɳ] in a description does not mean that they blindly follow their own convention that they do not employ the palatal counterpart [ɲ], but that the system permits them to distinguish the former symbol from the latter one. In addition, it is reported that /ɳ/ and /ɲ/ is contrastive in Trung (Dulong) (*Yunnan Shengzhi* 1998:616-617; Qin & Suzuki 2015).

Zhu (2010) points out this inconsistency in the IPA chart and provides a new more detailed list of consonants, which is basically needed for the phonetic description of Asian languages, especially Chinese dialects (or Sinitic languages and dialects). He sets a new column "prepalatal" between the retroflex and the palatal, and puts six related symbols [ʈʰ, ʈ, ɖ, ɕ, ʑ, ɳ] in the column. His proposition on the reform of the consonant chart is strongly supported by the many references to the IPA system[13] enough to criticise it and a good number of the data from Asian languages.

In the linguistics in China, these prepalatal symbols have been used for a long time without a special mention. They are simply necessary for the description of the languages spoken in China and not a Chinese convention or style. From the statistical aspect, the distribution of these sounds is out of balance in the world's languages and concentrated in Sino-Tibetan languages (cf. Zhu 2010:122, 124-125), thus some Chinese sound symbols should be referred to when their description. The IPA consonant chart considers the statistical significance, a part of which, unfortunately, reflects in the framework of its consonant chart and other symbols excluded from the chart.

Unfortunately, the present situation regarding the Chinese phonetic chart is not regarded as a well-evaluated system. One of the possible reasons is that the Chinese traditional terminology of the phonetics (cf. *Fangyan Diaocha Zibiao* 1981:81-82) has a problem; Zhu (2010) correctly points out the inaccuracy of the Chinese terminology of the phonetics, which does not follow an international convention that the manner of articulation is named based on the position of a passive articulator (labial, palatal, velar, etc.) but uses the naming based on the position of an active articulator (tongue position and form).[14] The naming of the international convention is in fact a little problematic as criticised by Zhang (2010). But with the reform of the terminology by Zhu (2010), the phonetic symbols mainly used by Chinese scholars can be understood in the same

[13] See the works cited by Zhu (2010:345-352) in the reference.

[14] See Zhu (2012) for details.

way as the IPA system.

I agree with Zhu's (2010) opinion also in terms of widespread, uncritical use of the term *palatalisation* (or *palatalised*) in phonetic descriptions (not in phonological ones), for it does not represent a specific manner of articulation, in other words, it means that one can leave the articulatory position ambiguous. This criticism is oriented to the description of multiple European languages and the general phonetics. The term *palatalisation* is not equal to any terms representing a specific articulatory position, and a solution that the diacritic [ʲ] substitutes for any postalveolar-prepalatal sounds as defined in IPA (since the revision 1989) is not adequate for a phonetic description at all.[15]

I suppose that the inconsistency of the IPA chart have been caused by an ambiguous use of the term palatalisation as well as an unnecessity for a phonetic description mentioned above. The relation among postalveolar, prepalatal, and palatal symbols on fricatives, plosives, and nasals defined in the IPA system is displayed as follows:

Table 1: relation among postalveolar, prepalatal, and palatal symbols in IPA

	postalveolar		prepalatal	palatal
fricative	ʃ, ʒ		ɕ, ʑ	ç, ʝ
plosive	{	tj, dj	}	c, ɟ
nasal	{	nj	}	ɲ

Here I claim that prepalatals should be well defined. As for the phonetic symbol of prepalatals, I define the articulatory manner of three symbols [t̺, d̺, n̺], which the IPA chart lacks, as follows:

・Prepalatal sounds designate that the articulatory position is a place between a postalveolar position to a prepalatal position, and the articulatory gesture is made with a

[15] However, it is possible that sounds described as a palatalisation is pronounced as prepalatal ones. Another possibility to describe a prepalatal sound is to use the diacritic [˕] and it is used by Kamiyama (2012:27) to reprsent one of the pronunciations of the initial consonant of Japanese /ni/: [n̻].

As an older fashion, it has also existed a way to designate a prepalatal articulation with a velar symbol plus a diacritic which represents a forwarded articulation, as employed in the description of Åarjelsaemi (Sydsamisk/Southern Saami; Finno-Ugric) by Lagercrantz (1923:145; 1926).

pre-dorsal of the tongue whose tip is always downwards.[16]

・[ʈ, ɖ, ɳ] designate a prepalatal voiceless plosive, a voiced plosive, and a nasal respectively, whereas [c, ɟ, ɲ] designate a palatal voiceless plosive, a voiced plosive, and a nasal respectively.

・The relation between [ʈ, ɖ, ɳ] and [c, ɟ, ɲ] is parallel to that between [ɕ, ʑ] and [ç, j] defined in the IPA chart.

The clearest nature of postalveolar sounds distinguished from prepalatal ones is the position of the tongue tip. The postalveolar sounds are basically articulated by the tongue whose tip is upwords.[17] In other words, when the tongue tip is downwards, an fricative articulation at the postalveolar position could be described as [ʂ, ʐ], not [ʃ, ʒ]. The importance of the tongue position for these two sounds taken into consideration, it may be more accurate to use the traditional Chinese terminology (*Fangyan Diaocha Zibiao* 1981:81-82) or add it to the passive articulatory position: *sheye* 'tongue-leaf' for [ʃ], and *shemianqian* 'pre-dorsal' for /ɕ/.

With the explanation and the extension of the phonetic symbol chart presented above, there is no reason why [ɳ] and [ɲ] are confused on the definition of the articulatory phonetics.[18] Then we have only a problem of the norm. Should we always follow the IPA convention for the description of languages? The answer is evidently "no." The IPA chart is not designed in order to describe all the sounds that a human being can produce. We had better consider that the IPA chart provides us of a minimum rule of the phonetic description and know more about its nature of imperfection.[19] The

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[16] Regarding this distinction, some European languages such as Northern Saami (Nordsamisk/ Sápmi; Finno-Ugric) possess a contrast between /tʃ/ and /ʈ/-/tɕ/, as well as a phoneme /ɳ/ (see Nickel 1994[2]:18, Nickel & Sammallahti 2011:14).

[17] Canepari (2006:62, 68) describes 'postalveolar' here as *postalveopalato-prolabiati* (labialised postalveopalatal). It means that the phonetic symbols [ɕ, ʑ] are generally labialised, at least in Italian, as mentioned in Canepari (2006:76).

[18] In addition to this, a postalveolar nasal [n̠] (official IPA notation) should be also distinguished from the neighbouring prepalatal one [ɳ]. Lhagang Choyu, a newly described language introduced in Suzuki & Sonam Wangmo (2017), has denti-alverolar /n/, postalveolar /n̠/, and prepalatal /ɳ/ contrasts of nasals for the relevant position.

[19] It is sure that the IPA system is insufficient for a specific purpose of the phonetic transcription. For example, Canepari (1999) provides a new framework of sound symbols for the Italian dialectology. Jiang (2012) uses the word *localised revision* of the IPA chart to justify the necessity to describe languages spoken in China.

system provided by Zhu (2010) may be too much complicated but he also claims its necessity for describing varieties spoken in China or Asia, especially undescribed ones in which we cannot predict how exotic sounds there are (Zhu 2010:337).

Even the frame with the font set provided in Zhu (2010) lacks some important symbols for the Tibeto-Burman languages, e.g. a dental edge plosive mainly attested in Burmese (see Suzuki 2013 for a case in a Tibetic language). I believe that all the scholars have a right to create new necessary symbols with a clear articulatory definition even as an ad hoc use when they meet a sound which is unlikely to exist in the IPA system. Evans (2010:39) says: "Of course, every now and then a new sound is encountered and a new symbol (or variant) needs to be developed, accompanied by an explicit description of how it is made, ...".[20]

Hayward (2000:275) points out that the IPA is intended to be a flexible system of notation, which sometimes permits practitioners of IPA transcription to re-define individual symbols, and claims that flexibility has been the Alphabet's strength. However, an attempt to enlarge the system, i.e., to add new symbols, is not always welcome, in which flexibility does not exist. Scholars describing Sino-Tibetan languages should note this point and persue more accurate, appropriate ways of sound notation.

3. Prepalatals and palatals in Tibetan dialects

There exist many works and descriptions of Tibetan dialects conducted by various scholars. Generally, Tibetan dialects have the series of prepalatals and/or palatals, in which we can point out some tendencies: plosives, and an approximant are articulated as a palatal ([cʰ, c, ɟ; j]), and the others as a prepalatal ([tɕʰ, tɕ, dʑ; ɕʰ, ɕ, ʑ; ɳ]); liquids articulated at the palate rarely appear.

In these sounds, the nasal articulation is described the most confusingly in the previous works; both the prepalatal [ɳ] and the palatal [ɲ] exist in the descriptions by various scholars on the same variety. For example, this sound attested in the Derge [sDe-dge] dialect is described as [ɳ] in sKal-bzang 'Gyur-med & sKal-bzang dByangs-can (2002), and as [ɲ] in Häsler (1998). Based on my observation, including a

[20] I should also like to listen to the words of 'Jam-dpal Tshul-khrims (2009:back cover): "We see different things from the same angle, but sometimes we need to view the same thing differently. The International Phonetic Symbols is [*sic*] the only spectacles you could wear on your eyes to look at human phonology so far and it is mainly from a western viewpoint."

discussion about the place where the tongue makes contact other than listening,[21] the articulatory position is prepalatal, thus the former is more adequate. The same situation is attested in other varieties such as rGyalthang [rGyal-thang] (Hongladarom 1996), gTorwarong [gTor-ma-rong] (Bartee 2007), Zhongu [Zho-ngu-khog] (Sun 2003) as well as Lhasa (Hoshi 2003; Tournadre & Sangda Dorje 2009) and Zhikatse [gZhis-ka-rtse] (Haller 2000). When I have observed the pronunciation of these dialects, I have realised that /ɲ/ in the previous studies is pronounced as a prepalatal [ɳ̟] without any doubt; in this sense, the phonetic description in several previous studies are not described in sufficient detail even though we cannot obtain from each work any information why theses authors used the phonetic symbol [ɲ] (or why they did not use [ɳ̟]). Because of this reason, it is not appropriate to criticise the usage of phonetic symbols itself in the previous works.[22]

This difference and the phonological treatment seems to be a small issue, and one may say that there will not be an influence to the phonological system because [ɳ̟] and [ɲ] cannot form a distinction. Of course, this claim is against the principle discussed in the previous section;[23] however, there is one more important discovery. I have found that in a few dialects spoken in Yunnan, the difference between the two sounds is significant and it plays an important role on the historical development of the dialects which belong to a group called Sems-kyi-nyila [Sems kyi nyi-zla]. This study is being conducted under the perspective of geolinguistics (a.k.a. linguistic geography), in which several previous works such as Moulton (1960), Grootaers (1976:250), and Sibata (1976:252) claim the requirement of a precise phonetic description for creating linguistic maps to achieve a geolinguistic analysis.

The current sub-classification of the Sems-kyi-nyila dialectal group is following:[24]

- rGyalthang (spoken in the central area of Shangri-La County)
- East Yunling Mountain (spoken along Jinshajiang River)

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[21] Unfortunately, because of difficulty of researches, I cannot provide any data taken from an experimental study such as a palatography.

[22] What should be criticised may be the attitude to respect the convention in all the time even with any new findings.

[23] There is one exception common to the Tibetic languages: /r/. The sound represented by /r/ is so various that we cannot avoid abstraction of the phonetic description. However, the dialects to be discussed in this section often realise /r/ as it is defined in the IPA chart : alveolar trill.

[24] The basic subclassification was proposed by Suzuki (2012b, 2013b, 2015). The following list is an up-to-date version.

- Melung (spoken mainly in Weixi County)
- dNgo (spoken in some hamlets of Wengshang, Mulu, and Nagela, Geza Village, Shangri-La)
- Lamdo (spoken only in Langdu Hamlet, Geza Village, Shangri-La)

Among the subgroups above, the distinction between prepalatals and palatals is attested in Lamdo systematically, and in several dialects of rGyalthang, East Yunling Mountain, and dNgo subgroups partially. Other than them, the mBalhag dialect and the sPomtserag dialect, both of which do not belong to the Sems-kyi-nyila group but to the sDerong-nJol group, have a remarkable distinction in these articulatory positions. The Appendix at the end of article provides two full consonant systems of the Khrezhag and mTshomgolung dialects of the rGyalthang subgroup based on Suzuki (2016), which represent the variation of prepalatal-palatal consonant situation in Khams Tibetan.

First I display the consonant system on retroflex,[25] prepalatal, and palatal positions of plosives, affricates, fricatives, and nasals in Lamdo:[26]

Table 2: related consonant system in Lamdo

	retroflex	prepalatal	palatal
plosive	ʈʰ	ʨʰ	cʰ
	ʈ	ʨ	c
	ɖ	ɖ͡ʑ	ɟ
affricate		tɕʰ	
		tɕ	
		dʑ	
fricative	ʂʰ	ɕʰ	
	ʂ	ɕ	ç
	ʐ	ʑ	
nasal		ɳ	ɲ

The system in Lamdo is a definitely rare case among the Tibetic languages, in which the plosive, fricative and nasal series have a distinction between the prepalatals

[25] The retroflex series are necessary for the historical analysis.

[26] All the language data were collected by the present author unless the source is mentioned. The phonetic description includes the IPA symbols and necessary non-IPA symbols defined in Zhu (2010). The tone is described as a word-tone system, even in square brackets, with the following signs:

¯ : high level ˊ : rising ˆ : rising-falling (or low level) ˋ : falling

and the palatals. Almost all of them have a good sound correspondence with WrT, that means that the phonetic system of Lamdo has a relation to the ancient Tibetan and that the process of the sound change is merely different from well-known varieties. The basic sound correspondence is as follows:[27]

pronunciation	WrT correspondence[28]
retroflex plosives	*dr*-series, some examples of *Kr*- and *Pr*-series
	e.g. /ˋʈɔʔ/ ‘six’ (*drug*), /ˉʈʰə/ ‘ten thousand’ (*khri*)
prepalatal plosives	*C*-series
	e.g. /ˊʨa/ ‘tea’ (*ja*), /ˉʨo ʰtɕiʔ/ ‘eleven’ (*bcu gcig*)
palatal plosives	*Kr*-series
	e.g. /ˊcə/ ‘knife’ (*gri*), /ˉʱɟo: rə/ ‘button’ (*sgro*)
prepalatal affricates	*Ky*-series and some examples of *C*-series
	e.g. /ˉdʑa/ ‘hundred’ (*brgya*), /ˋtɕʰɯʔ/ ‘you’ (*khyod*)
retroflex fricatives	*SH*-series
	e.g. /ˉʂʰa/ ‘meat’ (*sha*), /ˊʂo wa/ ‘hat’ (*zhwa*)
prepalatal fricatives	*Py*- and *Pr*-series, and *y*
	e.g. /ˊɕa/ ‘bird’ (*bya*), /ˊʑo: tɕẽ/ ‘stirrup’ (*yob*)
palatal fricative	*sl* and *lh*
	e.g. /ˉça/ ‘weave’ (*sla*), /ˉça/ ‘god’ (*lha*)
prepalatal nasal	*ny*, *my*-series, and some of *’j*
	e.g. /ˉŋʚõ/ ‘Naxi’ (*’jang*), /ˊŋʚa/ ‘fish’ (*nya*)
palatal nasal	*mgy* (one example only)
	e.g. /ˊɲo: pa/ ‘quick’ (*mgyogs pa*)

Minimal pairs of two articulatory positions are limited; however, as displayed in the list above, the initial consonants at the beginning of words as in /ˉŋʚõ/ ‘Naxi’ and /ˊɲo: pa/ ‘quick,’ /ˉʨo ʰtɕiʔ/ ‘eleven’ and /ˉʱɟo: rə/ ‘button,’ and /ˊɕa/ ‘bird’ and /ˉça/

[27] An overall introduction of the phonetic description system employed here is based on Suzuki (2005).

[28] Abbreviations concerning the column of WrT corresponcence: *dr*-series = WrT *dr* and *’dr*; *Kr*-series = all the combinations including WrT *kr, khr* and *gr*; *Pr*-series = all the combinations including WrT *pr, phr* and *br*; *C*-series = all the combinations including WrT *c, ch* and *j*; *Ky*-series = all the combinations including WrT *ky, khy* and *gy*; *Py*-series = all the combinations including WrT *py, phy* and *by*; *SH*-series = all the combinations including WrT *zh* and *sh*; *ny*-series = all the combinations including WrT *ny*; *my*-series = all the combinations including WrT *my*.

'weave' are contrastive. These pairs can support an existence of the systematic contrast between the prepalatal and palatal positions in the Lamdo dialect.

The prepalatal plosives /ʈʰ, ʈ, ɖ/ themselves rarely appear in Tibetan. A far as I know, the dialects possessing them other than Lamdo are merely nDappa (Muli-nDappa group), Nagskerags (Chaphreng group) and Wengshang (affiliation undetermined) of Khams Tibetan. They are spoken in the region around the Lamdo-spoken area. However, these dialects lack the palatal series (except for palatal fricative /ç/ and approximant, as in Lamdo), the prepalatal plosives thus form a contrast with the prepalatal affricates, for example, /ˊⁿɖõː/ 'tail' (*mjug ma*) and /ˊⁿdʑuː/ 'change' (*'gyur*) in the nDappa dialect. This fact can also highlight the peculiarity of the phonological system in the Lamdo dialect.

Second, the consonant system of the retroflex, prepalatal and palatal series in the Choswateng dialect is following:

Table 3: related consonant system in Choswateng

	retroflex	prepalatal	palatal
plosive	ʈʰ		cʰ
	ʈ		c
	ɖ		ɟ
affricate	ʈʂʰ	tɕʰ	
	ʈʂ	tɕ	
	ɖʐ	dʑ	
fricative	ʂʰ	ɕʰ	çʰ
	ʂ	ɕ	ç
	ʐ	ʑ	j
nasal	ɳ	ȵ	

The Choswateng dialect lacks the prepalatal plosive series; however, it has a systematical distinction of the fricatives between the prepalatal and the palatal, which characterises this dialect. The basic sound correspondence with WrT is as follows:

pronunciation	WrT correspondence
retroflex plosives	*dr*-series, some examples of *Kr*- and *Pr*-series
	e.g. /ˊʈə/ ‘ask’ (*dri*), /ˋʈʰə ʈʰɑʔ/ ‘10000’ (*khri phrag*)
palatal plosives	*Kr*-series and *’br*
	e.g. /ˋcʰɑʔ/ ‘blood’ (*khrag*), /ˉᶮɟə/ ‘female yak’ (*’bri*)
retroflex affricates	*C*-series
	e.g. /ˊʈʂa/ ‘tea’ (*ja*), /ˉʈʂʰɯ/ ‘water’ (*chu*)
prepalatal affricates	*Ky*-series and some examples of *C*-series
	e.g. /ˉʱdʑa/ ‘hundred’ (*brgya*), /ˋʰtɕiʔ/ ‘one’ (*gcig*)
retroflex fricatives	*SH*-series
	e.g. /ˉʂʰa/ ‘meat’ (*sha*), /ˊzə/ ‘four’ (*bzhi*)
prepalatal fricatives	*Py*-series, some of *s* and *z*
	e.g. /ˊɕa/ ‘bird’ (*bya*), /ˉʰɕiː/ ‘clear’ (*gsal*)
palatal fricatives	*Pr*-series
	e.g. /ˊçɑʔ/ ‘rock’ (*brag*), /ˋʱjɔ̃/ ‘sugar’ (*sbrang*)
retroflex nasal	unclear origin
	e.g. /ˊʔa ɳa kẽ/ ‘we (exclusive)’
prepalatal nasal	*ny* and *my*-series, including “older” orthography
	e.g. /ˊɲa/ ‘fish’ (*nya*), /ˋʱɲiʔ/ ‘eye’ (*mig-dmyig*)

The palatal fricatives, the most interesting feature of the Choswateng dialect, originate from WrT *Pr*-series regularly. Their pseudo-minimal pairs with palatals are, for example, /ˋɕʰeʔ/ ‘half’ (*phyed*) - /ˉçʰe ŋa/ ‘beads’ (*phreng ba*), /ˉʰɕiː/ ‘clear’ (*gsal*) - /ˉʰçĩ/ ‘cloud’ (*sprin*), and /ˊʱʑɔ̃/ ‘study’ (*sbyang*) - /ˋʱjɔ̃/ ‘sugar’ (*sbrang*). The palatal fricative series of the Choswateng dialect should be discussed from a historical linguistic perspective, hence we will look at a related historical development more in detail later. The Choswateng dialect does not possess the phoneme /ɲ/ as a simplex, but as in /ˉᶮɟə/ ‘female yak,’ [ɲ] exists as a homorganic prenasal element, which cannot alternate with [ɳ] even phonetically. This means that speakers of Choswateng perceive the two nasals in totally different way even though they two are not contrastive.

In addition, I display the case of the consonant system of rTswamarteng, gYaglam, mBalhag, and Shugsum dialects, of which the first two belong to the East Yunling Mountain subgroup and the last two are not a member of the Sems-kyi-nyila group:

Table 4: related consonant system in rTswamarteng and gYaglam

	retroflex	prepalatal	palatal	/	retroflex	prepalatal	palatal
	ʈʰ			/	ʈʰ		
plosive	ʈ			/	ʈ		
	ɖ		ɟ	/	ɖ		ɟ
		tɕʰ		/		tɕʰ	
affricate		tɕ		/		tɕ	
		dʑ		/		dʑ	
	ʂʰ	ɕʰ	çʰ	/	ʂʰ	ɕʰ	çʰ
fricative	ʂ	ɕ	ç	/	ʂ	ɕ	ç
	ʐ	ʑ	j	/	ʐ	ʑ	j
nasal		ɳ		/		ɳ	

Table 5: related consonant system in mBalhag and Shugsum

	retroflex	prepalatal	palatal	/	retroflex	prepalatal	palatal
	ʈʰ		cʰ	/	ʈʰ		cʰ
plosive	ʈ		c	/	ʈ		c
	ɖ		ɟ	/	ɖ		ɟ
		tɕʰ		/		tɕʰ	
affricate		tɕ		/		tɕ	
		dʑ		/		dʑ	
	ʂʰ	ɕʰ		/	ʂʰ	ɕʰ	
fricative	ʂ	ɕ	ç	/	ʂ	ɕ	ç
	ʐ	ʑ		/	ʐ	ʑ	
nasal		ɳ		/		ɳ	ɲ

As the above-mentioned data show, the most frequent distinction between a prepalatal and palatal is attested in the fricative series. However, we cannot neglect the existence of that in other series such as the plosive (Lamdo only) and nasal (Lamdo and Shugsum only).[29] I will explicit interesting ongoing sound changes regarding the nasal

[29] As for the affricate series, there are several previous studies which describe an affricate distinction between prepalatals ([tɕ]-series) and palatals ([cç]-series) in Amdo Tibetan (Hua 2002, Wang 2012, etc.). My personal researches verify that the dialects such as dGonpa (spoken in Zhouqu County, Gansu), Rebgong (spoken in Tongren County, Qinghai), Bodgrong (spoken in Gongshan County, Yunnan), and Sangdam (spoken in Kachin State, Myanmar) have this type of distinction.

contrast attested in the Shugsum dialect. The palatal nasals in this dialect originate from the WrT combination *'j*, which originally corresponds to a homorganic-prenasalised voiced palatal plosive /ⁿɟ/. The Shugsum dialect shows that prenasalised voiced obstruents have tendency to be realised as a *simple nasal* via a post-stopped nasal /ɲɟ/ or [ɲʲ], but this sound change is on the ongoing process. For example, the word /ˉɲuː/ 'nJol (Shengping Town in Deqin County)' originated from WrT *'j*, which includes such pronunciations as [ɲuː, ɲʲuː, ɲɟuː][30] (tonal mark omitted). This word will be contrastive with /ˊɳuː/[31] 'change' (*'gyur*). Of course, this phenomenon is common to all the prenasalised obstruents, so we can synchronically observe a sound change like /ᵐb/ [ᵐb] > /mb/ [mb, mᵇ] > /m/ [m] for WrT *'b*. Hence, it it highly possible that the present distinction between /ⁿdʑ/ and /ⁿɟ/ gradually changes into that between /ɳ/ and /ɲ/. The rare distinctions mentioned above are certainly related to Written Tibetan forms, and the process of the sound development is merely curious.

Another interesting feature can be pointed out from the historical point of view: the sound development of prepalatal and palatal series. Compare the system in three dialects Choswateng, Gyennyemphel and rGyalthang belonging to the rGyalthang subgroup in parallel:

[30] My collaborator of the Shugsum dialect prefers a mere nasal [ɲ] to a post-stopped nasal [ɲɟ] for this word. The latter form is used by some other Shugsum-speakers.

[31] This word, or morpheme, is often used in a part of the proper name like *'Gyur-med* in the Shugsum dialect.

Table 6: related consonant system in three dialects of the Sems-kyi-nyila group

	Choswateng			Gyennyemphel			rGyalthang		
	A	B	C	A	B	C	A	B	C[32]
1	ʈʰ		cʰ	ʈʰ		cʰ	ʈʰ		cʰ*
	ʈ		c	ʈ		c	ʈ		c*
	ɖ		ɟ	ɖ		ɟ	ɖ		ɟ*
2	ʈʂʰ	tɕʰ			tɕʰ		ʈʂʰ	tɕʰ	
	ʈʂ	tɕ			tɕ		ʈʂ	tɕ	
	ɖʐ	dʑ			dʑ		ɖʐ	dʑ	
3	ʂʰ	ɕʰ	çʰ	ʂʰ	ɕʰ		ʂʰ	ɕʰ	
	ʂ	ɕ	ç	ʂ	ɕ		ʂ	ɕ	
	ʐ	ʑ	j	ʐ	ʑ		ʐ	ʑ	
4	ɳ	ɳ̈			ɳ̈			ɳ̈	

Among them, the Choswateng dialect has the most complicated system, which has a good sound correspondence with WrT as mentioned above. In Gyennyemphel, the palatal plosive series remain as in Choswateng and the fricatives disappeared;[33] as seen above, the sound correspondence of palatal fricatives in Choswateng is WrT *Pr*-series, which have merged into prepalatal ones in Gyennyemphel. This merger is supported by the remnants of the sound correspondence with WrT *'br* as a palatal prenasalised plosive: /ᵑɟə/ 'female yak' (*'bri*) and /ᵑɟɔʔ/ 'dragon' (*'brug*). In rGyalthang, the palatal plosive sounds (shown with *) are merely used by speakers in elder generation, which form a contrast with the prepalatal affricates, and those in younger generation are pronounced as a prepalatal affricate and the merger of palatals into prepalatals has completed. This sound correspondence implies that the archaic sound system is the type of Choswateng and the palatal series are in convergence with the prepalatal counterparts. The chronological order of convergence must be firstly a nasal (cf. the case of Choswateng), secondly fricatives (cf. the case of Gyennyemphel) and finally

[32] Abbreviations: A = retroflex, B = prepalatal, C = palatal; 1 = plosive, 2 = affricate, 3 = fricative, 4 = nasal.

[33] As for fricatives, a palatal voiceless fricative phoneme /ç/ also exists in the mBalhag and Shugsum dialects, but its origin is different from that in the Choswateng dialect. An example of the palatal voiceless fricative in Shugsum is provided in the examples below, which originates from WrT *lh*. Other than them, /ç/ distinguished from /ɕ/ exists in the sKobsteng dialect (spoken in Weixi County; a member of the Melung subgroup of the Sems-kyi-nyila group), in which /ç/ originates from WrT *sny* and *smy*.

plosive-affricates (cf. the case of rGyalthang in younger generation). Examples are listed below:

Table 7: Contrast of sound correspondence in Yunnan Tibetan dialects[34]

WrT‘gloss’	Shugsum	mBalhag	Lamdo	Chos.	Gyen.	rGyal.
chu ‘water’	ˉcʰɯ	ˉtɕʰɯ	ˉʈʰɜ	ˉʈʂʰɯ	ˉʈʂʰɯ	ˉʈʂʰɯ
khyod ‘you’	ˉtɕʰʉʔ	ˉtɕʰʉʔ	ˋtɕʰʉʔ	ˋtɕʰʉʔ	ˋtɕʰʉʔ	ˋtɕʰʉʔ
khrag ‘blood’	ˉʈʰɑʔ	ˋcʰaˤʔ	ˋcʰɑʔ	ˋcʰɑʔ	ˋcʰɑʔ	ˋtɕʰɑʔ
bya ‘chicken’	ˊɕa	ˊsa	ˊɕa	ˊɕa	ˊɕa	ˊɕa
brag ‘cliff’	ˊʈɑʔ	ˊɕɑʔ	ˊɕɑʔ	ˊçɑʔ	ˊɕɑʔ	ˊɕɑʔ
’brug ‘dragon’	ˊⁿɖɔʔ	ˊᶮɟɔʔ	ˊⁿɖ̟ɔʔ	ˊᶮɟɔʔ	ˊᶮɟɔʔ	ˊⁿdʑɔʔ
nya ‘fish’	ˊŋa	ˊŋa	ˊŋa	ˊŋa	ˊŋa	ˊŋa
’jol ‘nJol’	ˉɲʉː	ˉⁿdʑʉː	ˊŋʉː	ˊⁿdʑʉː	ˊⁿdʑʉː	ˉⁿdʑʉː
lha ‘god’	ˉça	ˉça	ˉça	ˉl̥a	ˉl̥a	ˉl̥a

Table 7 displays variegated origins in the dialects in spite of a similar phonological system regarding the palatal area. In the historical background, similar phonological systems as displayed in tables 2, 3, and 4 are obtained from different sound changes from each other.[35]

Based on the data displayed above, I will point out two findings. The first one is on the fricative series: I have shown the data of six dialects above, of which four have a distinction between a prepalatal and palatal on the fricative series (Shugsum, mBalhag, Lamdo, Choswateng); the distinction on the fricatives thus appears more frequently than other series such as plosives and nasals;[36] if the phonetic symbols provided in the IPA chart reflect a general tendency of the world’s known languages, the tendency that

[34] Abbreviations: Chos. = Choswateng, Gyen. = Gyennyemphel, rGyal. = rGyalthang (younger).

[35] We should think about the variegation of so-called Khams Tibetan *dialects*. I have mentioned above examples of two Saami languages, citing Lagercrantz (1923, 1926), Nickel (1994[2]), and Nickel & Sammallahti (2011); however, they are sometimes regarded as *two dialects of one language*. Personally, I think it is highly welcome to regard each *dialect group* of Khams Tibetan as an independent language from each other. If we admitted this viewpont, Table 6 would represent a *linguistic* (not *dialectal*) diversity of Tibetic languages spoken in Yunnan.

[36] Other than these dialects, many varieties of the sDerong-nJol group also have a prepalatal-palatal distinction of the voiceless non-aspirated fricative, /ɕ/ and /ç/, even though they do not possess other contrasts between the two articulatory positions. The phoneme /ç/ corresponds to WrT *lh* and *sl* as shown in Table 6.

prepalatal fricatives, of which the phonetic symbols are officially defined, are attested more frequently is also true in the Tibetan dialects. The second one is on the nasal series: all the dialects have a prepalatal nasal /ɳ/, which corresponds to WrT *ny* even though other members of WrT *ca-sde* (i.e., *c, ch, j*) correspond to retroflex affricates as in Choswateng, Gyennyemphel and rGyalthang; taking a glance at the case of other Tibetic languages and dialects, we can know that WrT *ca-sde* corresponds to prepalatal articulation in the majority of varieties; WrT *ny* is also a member of *ca-sde*, that means the most conservative sound correspondence in this series.[37]

Based on the second finding mentioned above, if one reconstructs a proto-sound for WrT *c, ch, j* as prepalatal series, it will be more reasonable to choose a reconstruction of WrT *ny* as a prepalatal nasal as well.[38] This idea is widely accepted by Chinese scholars such as Hua (2002), Jiang (2002), sKal-bzang 'Gyur-med & sKal-bzang dByangs-can (2004) and Zhang (2009). However, Jacques (2012), who proposes a new transcription system of Written Tibetan, recommends to use the phonetic symbol 'ɲ' instead of WrT *ny*. It means that a hypothetical phonetic realisation of WrT *ny* is a palatal nasal 'ɲ,' which is in a different way from WrT *c, ch, j*, which are prepalatal affricates. Not all majority cases can be prestigious in a reconstruction of the proto-form, but it is too difficult that the phonological system of older Tibetan is determined with a concensus.[39] In order to discuss its phonology, we should be free from the limitation of the IPA system and consider examples of all kinds of data of modern dialectal varieties which are also free from it. Consequently, the idea of Jacques (2012) seems to be an unreasonable imposition of his preferred convention.

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[37] As far as I know, there are no varieties which have a retroflex nasal correspondence with WrT *ny*. One remarkable case is found in the Bragkhoglung dialect of Cone Tibetan (spoken in a part of Cone County, Gansu). It has a retroflex affricate correspondence with WrT *c, ch, j*, whereas an alveolar nasal correspondence is attested on WrT *ny*, for example, /˥ʈʂʰɯ/ 'water' *chu*, /˥ʈʂa/ 'tea' *ja*, and /˧na/ 'fish' *nya*. So does the gTsangbawa dialect of Cone Tibetan (Yang 1995, rNam-rgyal Tshe-brtan 2008). This phenomenon may imply an unstability of the retroflex nasal in the phonology of the Tibetic languages. Several dialects of Khams Tibetan spoken in Yunnan, however, possess a retroflex nasal, some of which originate from WrT *'br* and *'dr*, not from *ny*, for example, /˧ɳɔʔ/ 'dragon' *'brug* (in the Byagzhol dialect) and /˧ɳa ɳa/ 'same' *'dra 'dra* (in the Tshareteng dialect).

[38] Contrarily, Hill (2010:114) gives postalveolar affricates for WrT *c, ch, j* and a palatal nasal for WrT *ny* as a hypothetical phonetic value.

[39] Hill (2010) proposes a reconstruction form as *ty and *dy in Pre-Tibetan (Old Tibetan in his term) which corresponds to WrT *c, ch, j*. WrT *ny* is also parallel to this series, which is reconstructed as *ny, a combination *n and a glide *y. Thus one can expect that WrT *c, ch, j* as well as *ny* change in the same way.

Last but not least, I will emphasise that all the data in this section were collected and described by only one person, the present author, with only one criterion of the phonetic observation and description. There is no necessity to adjust different conventions to conduct historical discussions. Or, in other words, it might be impossible to illuminate such a minute, but important historical development of the Sems-kyi-nyila dialectal group if there existed various conventions of the phonetic description. Consequently, one should apply the most complicated system of the phonetic description as Zhu (2010:337) says.

4. Concluding remarks

This article claimed the necessity of three prepalatal sound symbols [ʈ, ɖ, ɳ] that IPA does not admit for the description of some Tibetan dialects. They are indispensible to the Tibetan dialectology, with which we can do a good discussion of a diachronic sound change as well as a detailed synchronic phonetic description.

Other than this type of a concrete contribution for the phonetics and the Tibetan dialectology, I intended to reconsider a phonetic reconstruction and transcription proposed in Jacques (2012). His use of [ɲ] as a phonetic value of WrT *ny* never represents a common understanding of the phonology of Old Tibetan; as the data of many dialects from dBus (Lhasa), gTsang (Zhikatse), Khams and Amdo show, WrT *ny* corresponds to [ɳ] (whichever its phonological description is), a possible claim may be that the articulatory distinction on the nasal did not exist at the palate area. From this viewpoint, we should avoid using any phonetic symbols for the transliteration of WrT. At least, this proposal merely seems to be an imposition of a convention. Through the discussion of this article, I suggest to readers reconsidering whether to follow the method of Jacques (2012) is more appropriate or not.[40]

We may point out the difference among conventions of the phonetic description concerning the issue discussed in the paper, and claim to respect it. But wait, I am wondering whether it is really an appropriate attitude to maintain various conventions or to regard a certain convention as supremacy. As Jespersen (1889) attempted, to make an articulatory gesture, to produce multiple manners (plosion, friction, nasality, etc,), and to produce various voicing patterns (i.e., phonations) are three different things. To exist frequently or not (imagine the relation between [ɕ] and [ɳ]) is not a question on

[40] If we really consider the claim by Jacques (2012) that a single letter should be given for a transliteration of one Tibetan script, we can use ‘ñ’ for WrT *ny*, which is neutral for a phonetic transcription.

the system but on the necessity. Zhu (2010:337-338) concludes that the most important thing is to construct a perfect conceptual system, using a metaphor to construct a sufficient merchandise rack including spaces for products to be supplied.[41] The frame of IPA, unfortunately, has already been adjusted according to the nature of generality, and does not provide a 'sufficient rack,' but minimised one.

Therefore, we should consider that the loyalty to the IPA may harm the data of unknown or undescribed languages, dialects, or varieties. Recently, *Minzu Yuwen* provided a special issue (2012 Vol.5) on the phonetic alphabet system for the languages spoken in China, in which many papers support using prepalatal phonetic symbols, as Jiang (2012). Regrettably, any papers of them do not appeal for an action to revise the IPA chart which includes a systematical defect on the prepalatal series; in order to avoid a criticism for the balkanisation of the use of phonetic symbols, it is strongly recommended that active approaches to reform the IPA chart are taken by specialists of the Tibeto-Burman or Sino-Tibetan languages in the future.

[41] '建立了一个完备的概念系统，就像建造了一个充分的货架' (When a perfect conceptual system was established, it seems that a sufficient merchandise rack was constructed; translation mine).

Appendix

Consonantism of the Khrezhag dialect, one of the dialects with the most complicated consonant system in the rGyalthang subgroup:

		A	B	C	D	E	F	G
plosive	aspirated	p^h	t^h	$ʈ^h$		c^h	k^h	
	non-aspirated	p	t	ʈ		c	k	ʔ
	voiced	b	d	ɖ		ɟ	g	
affricate	aspirated		ts^h	$ʈʂ^h$	$tɕ^h$			
	non-aspirated		ts	ʈʂ	tɕ			
	voiced		dz	ɖʐ	dʑ			
fricative	aspirated		s^h	$ʂ^h$	$ɕ^h$	$ç^h$	x^h	
	non-aspirated		s	ʂ	ɕ	ç	x	h
	voiced		z	ʐ	ʑ	ʝ	ɣ	ɦ
nasal	voiced	m	n	ɳ	ȵ	ɲ	ŋ	
	voiceless	m̥	n̥		n̥̈		ŋ̊	
liquid	voiced		l	r				
	voiceless		l̥	r̥				
semi-vowel	voiced	w				j		

A: bilabial B: denti-alveolar C: retroflex D: prepalatal
E: palatal F: velar G: glottal

Consonantism of the mTshomgolung dialect, one of the dialects with the simplest consonant system in the rGyalthang subgroup:

		A	B	C	D	E	F	G
plosive	aspirated	p^h	t^h	$ʈ^h$			k^h	
	non-aspirated	p	t	ʈ			k	ʔ
	voiced	b	d	ɖ			g	
affricate	aspirated		ts^h	$ʈʂ^h$	$tɕ^h$			
	non-aspirated		ts	ʈʂ	tɕ			
	voiced		dz	ɖʐ	dʑ			
fricative	aspirated		s^h	$ʂ^h$	$ɕ^h$		x^h	
	non-aspirated		s	ʂ	ɕ		x	h
	voiced		z	ʐ	ʑ		ɣ	ɦ
nasal	voiced	m	n		ȵ		ŋ	
	voiceless	m̥	n̥		n̥̈		ŋ̊	
liquid	voiced		l	r				
	voiceless		l̥	r̥				
semi-vowel	voiced	w				j		

A: bilabial B: denti-alveolar C: retroflex D: prepalatal
E: palatal F: velar G: glottal

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